

Electrical code issues and answers.

● Janet Lewis Leaves Labor and Industries

Janet Lewis, Washington's Chief Electrical Inspector since April 1997, recently submitted her resignation to the department. Many of our customers may be unaware that in addition to being a journeyman electrician, electrical administrator, and former electrical contractor, Janet is a graduate of the University of Washington Law School and has been a member of the bar since June 1996. She is looking forward to some much needed time off before she returns to work in private industry.

During her tenure as Chief, Janet has challenged the traditional thinking of the electrical program to attain new levels of service and professionalism that our customers rightfully expect.

Janet played a major role in the development of the electrical audit program and guided the electrical program through Labor and Industries' internal structural reorganization. She improved communication with our customers and consistency in electrical inspections by establishing the electrical section Internet web site and the monthly *ELECTRICAL CURRENTS*, Code Guidance from the Department of Labor and Industries newsletter. She updated, rescinded, or incorporated into electrical WAC rules many of the electrical section policies and enforcement procedures.

Janet helped to bring the electrical industry "on-line" by enabling electrical inspection requests via the Internet. The foundation has been laid for future on-line permit purchasing and retrieval of inspection results. She co-sponsored the CREDITS program to put state-of-the-art technology into the field with electrical inspector mobile computers to record inspection results and access electrician certification and contractor registration and licensing data on the job site.

In May 1999 Gov. Gary Locke named Janet as a recipient of the 1999 Governor's Distinguished Management Leadership Awards. L&I Director Gary Moore nominated Lewis for the award stating, *"Janet has taken a troubled program and turned it around. A program that once lacked trust and processes to measure itself is now recognized as a reliable partner for its customers and one that consistently monitors its progress. This is a tribute to Janet's tireless efforts to improve a program vital to the safety of Washington's citizens and business community."*

We in the electrical program will miss Janet's leadership, but we wish her continued success in her new venture.

● Acting Chief Electrical Inspector appointed

Ron Fuller has been appointed as the Acting Chief Electrical Inspector to replace Janet Lewis who is leaving in January. Ron has been with the electrical program for over eight years, as an electrical inspector, electrical plan reviewer, and electrical technical specialist. Before coming to L&I, Ron was the owner of a successful electrical contracting firm in Vancouver for five years. Ron also has extensive field construction experience and did electrical design for an engineering firm in Oregon. Ron will also be receiving a BA in Management this next year from the Evergreen State College. In addition Ron has been involved in effective public policy development and implementation as the volunteer Chair, for the City of Ridgefield Planning Commission.

So as you can see, Ron brings many skills and background experience to the job. Please welcome Ron as our new Acting Chief Electrical Inspector.

● Stakeholders Meetings are Scheduled For 2000

Stakeholders meetings have been scheduled well in advance to help all attendees better plan their busy schedules and agendas. This is your chance for input. You can also receive 4 CEU credits for attending the meeting and satisfactorily completing the take home exam that will be available at the meeting. The meetings now scheduled are as follows:

Bremerton ...January 18th, 6:30 – 9 PM

Bremerton L&I Service Location
500 Pacific Ave., Suite 400
Bremerton, WA

Pt. Angeles...February 24th, 6:30 – 9 PM

Port Angeles City Council Chambers
321 East 5th Street
Port Angeles, WA

● Is Ground-Fault Protection of Generator Feeders Required?

Article 215-10 states that *"each feeder disconnect rated 1000 amperes or more and installed on solidly grounded wye electrical systems of more than 150 volts to ground, but not exceeding 600 volts phase to phase, shall be provided with*

ground-fault protection of equipment in accordance with the provisions of Section 230-95.” Does this requirement extend to generator feeders? In general it does. However the answer depends on the type of equipment to which the generator is connected. There are three cases where Ground-fault protection (GFP) is either prohibited or not required.

- (1) **In Health Care Facilities** where an essential electrical system is required ground fault protection of feeders is prohibited “between the on-site generating unit(s) described in Section 517-35(b) and the essential electrical system transfer switch(es), (NEC 517-17(a)(2)).
- (2) **On Emergency Systems** “The alternate source for emergency systems shall not be required to have ground-fault protection of equipment with automatic disconnecting means “(NEC 700-26). A ground-fault indicating system is required for a grounded wye emergency system operating at more than 150 volts and a circuit protective device rated 1000 amperes or more. (NEC 700-7(d))
- (3) **Legally Required Standby** systems “shall not be required to have ground-fault protection of equipment.” (NEC 701-17)

● Dwelling Unit Receptacle Outlets

One of the most common code corrections issued by the department is NEC 210-52. This article addresses locations where receptacle outlets are required. The general provision, found in NEC 210-52 (a), requires receptacle outlets in every kitchen, family room, dining room, living room, parlor, library, den, sunroom, bedroom, recreation room, and similar rooms or areas of a dwelling unit. **This newsletter article does not replace study of NEC 210-52 to grasp a complete understanding of this code.** The following are mandatory locations of dwelling unit receptacle outlets:

General

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| • Within 6 feet of breaks in wall space | • In every 2 foot wall space |
| • Spaced so no point along the floor line in any wall space is more than 6 feet from an outlet | • Floor receptacles must be within 18 inches of the wall to be counted as a required outlet |

Small appliance circuits

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| • Two or more circuits required to serve receptacles in kitchen, pantry, breakfast room, dining room
Both circuits must appear on the countertop | • The two or more small appliance circuits can only serve receptacle outlets in the kitchen, pantry, breakfast room, dining room |
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Countertops

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| • In wall counter spaces that are 12 inches or wider | • Spaced so that no point along the wall line is more than 24 inches from an outlet |
| • At each island or peninsular counter space with a long dimension of 24 inches or greater and a short dimension of 12 inches or greater | • Installed not more than 18 inches above the countertop, not face up in the countertop, and readily accessible |

Other required outlet locations

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| • Basements and garages require that at least one outlet be installed. Outlet not required in detached garage unless power is run to the building | • Outside one and two family dwellings accessible and not more than 6 ½ above grade one in front and one in back of dwelling |
| • Hallways of 10 ft or more in length require a receptacle outlet | • Bathrooms on wall adjacent to the sink and within 36 inches of the sink |
| • Laundry areas require at least one receptacle outlet | • Refer to NEC 210-8 for gfcı requirements |

● Manufactured/Mobile Home Service Disconnect

NEC 550-23(a) requires the service equipment to be within sight from and not more than 30 feet from the exterior wall of the mobile home it serves. The service may be located elsewhere when a second service rated disconnecting means is provided that meets the “within sight from” and “not more than 30 feet from” requirement. Grounding at the additional disconnecting means must be in accordance with NEC 250-32 which allows running either an equipment grounding conductor to the second disconnect or not providing an equipment grounding conductor and bonding the neutral at the disconnect. Both methods require grounding electrodes at the service and the second disconnect.